



Agenda Item 4: NOTAM contingency plans, AIM deficiencies and ICARD system

Issues observed in the 5LNC module of the ICARD database

(Presented by the Secretariat)

SUMMARY	
This working paper presents the issues identified in the ICARD database that supports the implementation of the unique 5-letter name code (5LNC) used for significant point (<i>waypoint</i>) designators specified by ICAO Annex 11, as well as recommendations for their resolution.	
REFERENCES	
<ul style="list-style-type: none">• Annex 11 - <i>Air Traffic Services</i>• Annex 15 to the Convention on International Civil Aviation• State Letter AN 11/45.5-17/101• SAM/AIM multilateral meetings	
ICAO strategic objectives:	<i>A - Safety</i> <i>B - Air navigation capacity and efficiency</i> <i>E - Environmental protection</i>

1. **Background**

1.1 The ICARD database was established in 2010 and made available to the States on the ICAO portal. The objective of the database, *inter alia*, is to expedite the efficient and safe implementation of the 5-letter name code (5LNC) for proper planning of flight routes and procedures, while supporting ATS speech communications and aeronautical data management.

1.2 In early 2015, it was noted that States had updated the information on their significant points in the ICARD, but some situations had been generated that could affect safety, namely:

- existence of a significant number of duplicated names;
- similar sounding codes established in close proximity or on the same route;
- scarcity of points easy to pronounce; and
- differences between 5LNC data registered in ICARD and data published in the AIPs.

1.3 Furthermore, it has been noted that these issues have been generated by State practices resulting in outdated information in the ICARD database.

2. Discussion

2.1 In March 2017, ICAO completed the initial rollout of the new ICARD platform. The updated ICARD database system, which can be accessed through the ICAO secure portal, replaces the previous platform and will meet the needs of States to support efficient and safe implementation of unique 5LNCs.

2.2 The updating of the ICARD system is of the outmost important, as the current worldwide non-compliance with the provisions of Annex 11 - *Air traffic services* (Appendix 2, paragraphs 3.1 and 3.4) regarding 5LNC uniqueness, continues to create difficulties that might result in safety issues. The following issues related to 5LNCs have been identified:

- a) a significant number of duplicated codes (including codes in triplicate or quadruplicate);
- b) similar sounding codes established in close proximity or on the same flight plan route; and
- c) differences between 5LNC data registered in the ICARD database and that published in national aeronautical information publications (AIP).

2.3 The new platform of the 5LNC module is faster and more reliable. Likewise, it has graphical and search advantages, and provides lists that may be downloaded in XLS and PDF format, such as the list of 5LNC names of one State or an ICAO Region, even indicating duplicated codes. Duplicated codes occur between two States of the same ICAO Region or, more commonly, between States of different Regions.

2.4 The updated platform is capable of generating proximity alerts for points with similar letters or phonetics, and checks to whom they have been allocated, thus preventing the allocation of a code already being used or that is reserved for another State.

2.5 States should check all point names currently published in their AIP, in routes and procedures, and compare them with the set of codes reserved for the State. Furthermore, users could cross information with other available sources, such as aeronautical charts and aeronautical websites (*e.g.*: ICAO GIS, *Skyvector*, etc.). If a State identifies that 5LNCs are being used in its airspace that have not been requested through ICARD or that are not part of the batch reserved for that State, it shall initiate a gradual process of replacement of such points with ICARD, making sure to make a proper selection, and communicating it to the Regional Office for validation and release of such names in ICARD.

2.6 States must inform the Regional Office of the points that were properly reserved and allocated through ICARD, but are no longer in use due to deletion or changes in the flight route/procedures, so that they may be released in the ICARD database.

2.7 States must keep their list of accountable planners duly updated so that the Regional Office may coordinate and control the allocation of ICARD registrations.

2.8 Through State Letter AN 11/45.5-17/101, shown in **Appendix A** to this working paper, the General Secretariat requested States to apply rules that will help reduce the occurrence of duplicated points or similar sounding points established in close proximity or on the same route. The attachment to this letter describes actions to resolve issues related to duplicated points.

3. **Suggested action:**

3.1 Based on the above, the Meeting is invited to:

- a) take note of the information regarding the new 5LNC platform;
- b) follow, inasmuch as possible, the recommendations of the General Secretariat concerning the updating of the ICARD database and the resolution of duplicated 5LNCs;
- c) urge those States that have not done it yet, to update their list of accountable planners;
- d) check their list of 5LNC points, and compare and amend the points as needed; and
- e) send to the Regional Office any comment and information that might help improve the functions and management of the updated ICARD platform.

APPENDIX A

State Letter AN 11/45.5-17/101

**ICAO International Codes and Route
Designators (ICARD) database
system**



International
Civil Aviation
Organization

Organisation
de l'aviation civile
internationale

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de Aviación Civil
Internacional

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организация
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Ref.: AN 11/45.5-17/101

11 August 2017

Subject: ICAO International Codes and Route Designators
(ICARD) database system

Action required: Implement the five-letter name-code
(5LNC) Duplicate Resolution Rules and submit updated
information on 5LNCs

Sir/Madam,

1. I have the honour to inform you that ICAO completed the initial rollout of the new ICARD platform in March 2017. This updated ICARD database system, accessible on the ICAO Secure Portal, replaces the previous platform and will meet the needs of States to support efficient and safe implementation of unique 5LNCs.

2. The update of the ICARD system is of the utmost importance as the current worldwide non-compliance with Annex 11 — *Air Traffic Services*, (Appendix 2, paragraphs 3.1, 3.4) regarding 5LNCs uniqueness, continues to create difficulties causing potential safety-related issues. The following issues related to 5LNCs have been identified:

- a) a significant number of duplicated codes (including codes in triplicate and in quadruplicate);
- b) similar sounding codes in close proximity or on the same flight plan route; and
- c) differences between 5LNC data registered in ICARD and published in national Aeronautical Information Publications (AIPs)

3. In light of the increasing demand for 5LNCs to support implementation of performance-based navigation (PBN) without compromising safety, I invite you to carry out the actions described in the attachment through your State's ICARD focal point. Please contact the ICAO Regional Office accredited to your State should you require further support and guidance.

Accept, Sir/Madam, the assurances of my highest consideration.

Fang Liu
Secretary General

Enclosure:

Update of the ICARD database and resolution
of duplicated 5LNCs

UPDATE OF THE ICARD DATABASE AND RESOLUTION OF DUPLICATED 5LNCs

The update of the ICARD system and the resolution of 5LNC duplicates are of the utmost importance and all States are invited to take action as described below.

1. CLEAN-UP OF THE ICARD PLATFORM

1.1 A comparison of your State's list of 5LNCs recorded in ICARD and 5LNCs published in your State's national Aeronautical Information Publication (AIP) shall be undertaken to identify any discrepancies and to update the information in ICARD, to align with the information contained in your State's AIP. To get a list of your State's 5LNCs allocated in ICARD go to <https://www4.icao.int/ICARD> and:

- a) enter authorized username and password;
- b) in the main menu click on "Downloads"; and
- c) in the "List All per Country" option, select Region and Country, and click on the tabs to launch a report in pdf or excel formats.

1.2 ICARD shall be used as the central system for reservation and allocation of 5LNCs. The ICAO Regional Office accredited to your State shall be advised of any 5LNCs that are used but not recorded in ICARD, as well as any 5LNCs that are allocated to your State but no longer used and which shall be released from ICARD. Your State's contribution to this exercise will significantly reduce the creation of duplicates as well as enable ICAO to identify and resolve existing duplicates or similar-sounding 5LNCs that have a potential safety impact.

1.3 States are reminded of ICAO Annex 11 and Annex 15 provisions regarding 5LNCs, and the need to coordinate with other States and all ICAO Regional Offices to resolve existing duplicated 5LNCs.

2. 5LNC DUPLICATE RESOLUTION RULES

2.1 Whenever possible Member States with 5LNCs of the same name but allocated to more than one physical location (duplicates, triplicates, quadruplicates, etc.) shall discuss the voluntary release of duplicated 5LNCs to allow one State to retain that 5LNC. If no resolution is agreed, the following 5LNC duplicate resolution rules will apply:

Rule 1. Priority is given to (a) 5LNC(s) which is (are) already allocated in ICARD. Duplicated 5LNCs that are not allocated in ICARD shall be replaced by new 5LNCs. If two or more 5LNCs of the same name are in ICARD, Rule 2 applies.

Example: 5LNC KOBAS allocated in ICARD to two Member States.

Note: the Regional Office(s) shall advise the State(s) concerned to change those duplicated 5LNCs not in ICARD. Publication in AIP(s) shall not be considered as sub-criteria in these Resolution Rules.

Rule 2. If two or more 5LNCs of the same name are allocated in ICARD:

- a) creation date (date when the 5LNC was allocated in ICARD for that State)

If there are two or more 5LNCs with a creation date, the earliest date will have priority. After verification that the State with the priority date is still using that 5LNC, (a) new 5LNC(s) shall be proposed by the Regional Office(s) to the other State(s) with the same duplicated 5LNC;

- b) creation date versus no creation date

(A) new 5LNC(s) shall be proposed to the State(s) with no ICARD creation date;

- c) No creation date

If there are two or more 5LNCs of the same name without creation dates, Rule 3 applies.

Rule 3. If Rules 1 and 2 do not resolve the 5LNC duplication, the following characteristics will have priority:

- a) 5LNCs used in both terminal airspace (SIDs/STARs) and en-route airspace;
Note: The amount of changes foreseen and publication required in AIP sections AD and ENR could be very large
- b) 5LNCs used in high-density/high-complexity terminal airspace (e.g. SIDs/STARs, holdings, instrument approach procedures);
- c) 5LNCs used in en-route airspace (e.g. crossovers between two or more ATS routes, transfer of control points, upper/lower airspace routes, etc). Priority shall be given to highest number of ATS routes crossings through the 5LNCs concerned;
- d) 5LNCs used in low-density/low-complexity terminal airspace;
- e) 5LNCs used in other routes (domestic, temporary, helicopter, etc.)

Rule 4. Resolving conflicts:

- a) if any of the previous rules do not resolve 5LNC duplicates and if the 5LNC duplicates are within the area of accreditation of one Regional Office, that Regional Office will make the decision;
- b) if the 5LNC duplicates are in different regions, the Regional Offices involved shall agree on a resolution;
- c) if any of the previous rules do not resolve the 5LNC duplicates, ICAO Headquarters, in coordination with the relevant Regional Office(s), will make the final decision.